

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**RECEIVED**

JAN 04 2005

OFFICE OF PETITIONS

Applicant:	NARUMI, et al.	Examiner:	Thang V. Tran
Serial No.:	09/980109	Group Art Unit:	2653
Filed:	November 26, 2001	Docket No.:	10873.0771USWO
Title:	OPTICAL INFORMATION RECORDING METHOD, OPTICAL INFORMATION RECORDING APPARATUS AND OPTICAL INFORMATION RECORDING MEDIUM		

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT (37 C.F.R. § 1.97(c))

Mail Stop Amendment

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

With regard to the above-identified application, the items of information listed on the enclosed Form 1449 are brought to the attention of the Examiner. At least some of the references were recently cited in a European Search Report mailed November 17, 2004.

This statement should be considered because it is submitted before the mailing of a first Office Action after the filing of a Request for Continued Examination under 37 C.F.R. § 1.114 or a CPA under 37 C.F.R. § 1.53(d). Accordingly, no fee is due for consideration of the items listed on the enclosed Form 1449.

In accordance with 37 C.F.R. §1.98(a)(2), a copy of each document or other information listed on the enclosed Form 1449 is provided.

A concise explanation of the relevance of each non-English language document or other information is as follows (37 C.F.R. §1.98(a)(3)):

English abstracts have been included for all Japanese references.

No representation is made that a reference is "prior art" within the meaning of 35 U.S.C. §§ 102 and 103 and Applicants reserve the right, pursuant to 37 C.F.R. § 1.131 or otherwise, to establish that the reference(s) are not "prior art." Moreover, Applicants do not represent that a reference has been thoroughly reviewed or that any relevance of any portion of a reference is intended.

Consideration of the items listed is respectfully requested. Pursuant to the provisions of M.P.E.P. 609, it is requested that the Examiner return a copy of the attached Form 1449, marked

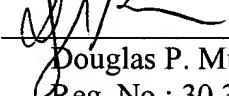
as being considered and initialed by the Examiner, to the undersigned with the next official communication.

Please charge any additional fees or credit any overpayment to Deposit Account No. 13-2725.

Respectfully submitted,

MERCHANT & GOULD P.C.
P.O. Box 2903
Minneapolis, MN 55402-0903
(612)332.5300

Dated: January 4, 2005

By: 
Douglas P. Mueller
Reg. No.: 30,300

DPM/ncb





P.B. 5818 - Patendaan 2
2280 HV Rijswijk (ZH)
E (070) 340 2040
Tx 31851 epo nl
FAX (070) 340 3018

Europäisches
Patentamt
Zweigstelle in
Den Haag
Recherche-
abteilung

European
Patent Office
Branch at
The Hague
Search
Division

Office européen
des brevets
Département A
La Haye
Division de la
recherche

Jeffrey, Philip Michael
Frank B. Dehn & Co.
179 Queen Victoria Street
London EC4V 4EL
GRANDE BRETAGNE

File 85-76914

10 DEC 2004

Frank B. Dehn & Co.
RECEIVED

ANSD

RECEIVED

JAN 04 2005

OFFICE OF PETITIONS

COPY

Date/Date

06.12.04

Zeichen/Ref./Réf.

85.76914

Anmeldung Nr./Application No./Demande n°/Patent Nr./Patent No./Brevet n°
00929923.1-2210/JP0003480

Anmelder/Applicant/Demandeur/Patentinhaber/Proffessor/Titulaire
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.

COMMUNICATION

The European Patent Office herewith transmits the supplementary partial European search report under Rule 46(1) EPC relating to the above-mentioned European patent application.

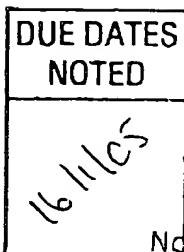
Copies of the documents cited in the search report are enclosed.

The applicant's attention is drawn to the following:

The search Division informs the applicant that if the European search report is also to cover inventions other than the invention first mentioned in the claims, a further search fee must be paid for each of these inventions, within ONE MONTH after notification of this communication.

If the application has been filed up to 30 June 1999, the search fee in force before 01 July 1999 (EUR 869,-) or the equivalent applicable on the date of payment is payable.
This applies also to the search fees requested under Rule 46(1) EPC.
See also OJ EPO 06/1999, 405.

☒ Additional set(s) of copies of the documents cited in the European search report is (are) enclosed as well. (01)



Note to users of the automatic debiting procedure:

Unless the EPO receives prior instructions to the contrary, the search fee(s) will be debited on the last day of the period for payment. For further details see the Arrangements for the automatic debiting procedure, Supplement to OJ EPO 02/1999.

REGISTERED LETTER

EPO Form 1507.2 (07.98)



European Patent
Office

SUPPLEMENTARY

PARTIAL EUROPEAN SEARCH REPORT

Application Number

under Rule 46, paragraph 1 of the European Patent Convention EP 00 92 9923

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	PATENT ABSTRACTS OF JAPAN vol. 1997, no. 04, 30 April 1997 (1997-04-30) -& JP 08 329540 A (HITACHI MAXELL LTD), 13 December 1996 (1996-12-13)	1,2, 8-10,14, 15	G11B7/0045 G11B7/125 G11B7/013
Y	* abstract; figures 1-3,24-29,35 *	3-6, 16-19	RECEIVED JAN 04 2005 OFFICE OF PETITIONS
Y	----- PATENT ABSTRACTS OF JAPAN vol. 1997, no. 03, 31 March 1997 (1997-03-31) -& JP 08 287465 A (RICOH CO LTD), 1 November 1996 (1996-11-01) * abstract; figures 4,5,8,11,13 *	3-6, 16-19	
Y	----- EP 0 797 193 A (MATSUSHITA ELECTRIC IND CO LTD) 24 September 1997 (1997-09-24) * page 7, line 3 - page 9, line 48; figures 4,8,15 * * page 25, line 34 - page 26, line 51 * * page 31, line 16 - page 34, line 11 *	3-6, 16-19	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			G11B

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

The present partial European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims.

2
EPO FORM 1503 09.02 (P04C23)

Place of search Munich	Date of completion of the search 17 November 2004	Examiner Hermann, R
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document		



European Patent
Office

LACK OF UNITY OF INVENTION
SHEET B

Application Number

EP 00 92 9923

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-6,8-10,14-19

Optical information recording method and corresponding apparatus wherein the unit recording area having a predetermined length and a predetermined width is formed by correcting a leading edge position of a recording pulse for recording the unit recording area other than the space area in accordance with a combination of a width of the unit recording area to be recorded and a width or length of the preceding unit recording area and by correcting a trailing edge position of the recording pulse in accordance with a combination of a width of the unit recording area to be recorded and a width or length of the next unit recording area.

2. claim: 7

Optical information recording method wherein the amounts of correction of the leading and trailing edge positions of the recording pulse are determined by recording and reproducing a predetermined recording test pattern before recording the information.

3. claim: 11

Optical information recording method wherein it is selected whether the information is represented by a width of the unit recording area in accordance with a type of information.

4. claim: 12

Optical information recording medium wherein an identifier for identifying whether information is represented by a width of the unit recording area is recorded previously on a predetermined area.

5. claim: 13

Optical information recording medium wherein amounts of correction of leading and trailing edge positions of a recording pulse for recording the unit recording area other than the space area that are determined by a width of the unit recording area to be recorded are recorded previously on a predetermined area as information.



European Patent
Office

LACK OF UNITY OF INVENTION
SHEET B

Application Number
EP 00 92 9923

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1 Reference is made to the following document:
D1: JP-A-08 329 540

2 In this European application multiple (groups of) inventions are present. The separate inventions are:

A Claims: 1 - 6, 8 - 10, 14 - 19
Optical information recording method and corresponding apparatus wherein the unit recording area having a predetermined length and a predetermined width is formed by correcting a leading edge position of a recording pulse for recording the unit recording area other than the space area in accordance with a combination of a width of the unit recording area to be recorded and a width or length of the preceding unit recording area and by correcting a trailing edge position of the recording pulse in accordance with a combination of a width of the unit recording area to be recorded and a width or length of the next unit recording area.

B Claim: 7
Optical information recording method wherein the amounts of correction of the leading and trailing edge positions of the recording pulse are determined by recording and reproducing a predetermined recording test pattern before recording the information.

C Claim: 11
Optical information recording method wherein it is selected whether the information is represented by a width of the unit recording area in accordance with a type of information.

D Claim: 12
Optical information recording medium wherein an identifier for identifying whether information is represented by a width of the unit recording area is recorded previously on a predetermined area.

E Claims: 13
Optical information recording medium wherein amounts of correction of leading and trailing edge positions of a recording pulse for recording the unit recording area other than the space area that are determined by a width of the unit recording area to be recorded are recorded previously on a predetermined area as information.

3 D1 has been identified as closest prior art. With reference to this document the following features are known (the references in parentheses applying to this document):

An optical information recording method (abstract; figs. 24 - 29, and 35; paragraphs '0117! - '0131!) comprising irradiating an optical information recording medium (figs. 1 and 5; the present invention clearly includes magneto-optical media) with a laser beam to cause a change in optical characteristics of a photosensitive recording film so that information is recorded as a mark,



European Patent
Office

LACK OF UNITY OF INVENTION
SHEET B

Application Number
EP 00 92 9923

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

wherein an area in the mark where a width of the mark is constant and a space area where the width is zero each are defined as a unit recording area (see fig. 35),

information is represented by at least three different widths of the unit recording areas (fig. 35(a)), and

the unit recording area having a predetermined length and a predetermined width is formed by correcting leading and trailing edge positions of a recording pulse for recording the unit recording area other than the space area in accordance with a width of the unit recording area to be recorded (see figs. 24 - 26; paragraph '0119!'). Furthermore, D1 describes a recording medium with a reproduction test pattern recorded thereon (figs. 1 - 3; paragraph '0049!'), an information recording method combining a multivalue recording and pulse edge recording (paragraph '0117!'), and a recording pulse sequence with a lower bias laser power level between the pulses (figs. 24 - 26).

4 Invention A

4.1 From comparison the following technical feature of the first invention make a contribution over this prior art (special technical features STF, Rule 30(1) EPC):

- the corrections of the leading and trailing edge positions are dependent on the preceding and the following unit recording area.

4.2 From this special technical feature (STF) the objective problem to be solved by the first invention can be formulated as:

- improve mark edge jitter.

5 Invention B

5.1 By comparing the second invention with the prior art, the following STF makes a contribution over this same prior art:

- the amounts of correction of the leading and trailing edge positions of the recording pulse are determined by recording and reproducing a predetermined recording test pattern before recording the information.

5.2 From this STF the objective problem to be solved by the second invention can be formulated as:

- determine the correction amounts of the leading and trailing edge position.

6 Invention C

6.1 By comparing the second invention with the prior art, the following STF makes a contribution over this same prior art:

- it is selected whether the information is represented by a width of the unit recording area in accordance with a type of information.

6.2 From this STF the objective problem to be solved by the second



European Patent
Office

LACK OF UNITY OF INVENTION
SHEET B

Application Number

EP 00 92 9923

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

invention can be formulated as:

- define the type of information suitable for the mark width recording method.

7 Invention D

7.1 By comparing the second invention with the prior art, the following STF makes a contribution over this same prior art:

- an identifier for identifying whether information is represented by a width of the unit recording area is recorded previously on a predetermined area.

7.2 From this STF the objective problem to be solved by the second invention can be formulated as:

- provide information about the medium type.

8 Invention E

8.1 By comparing the second invention with the prior art, the following STF makes a contribution over this same prior art:

- amounts of correction of leading and trailing edge positions of a recording pulse for recording the unit recording area other than the space area that are determined by a width of the unit recording area to be recorded are recorded previously on a predetermined area as information.

8.2 From this STF the objective problem to be solved by the second invention can be formulated as:

- provide the correction amounts for the leading and trailing edge position correction.

9 Conclusion

9.1 The five separate inventions do show different special technical features that do have nothing in common and that are not technically corresponding. Furthermore, the five inventions solve different objective problems. Hence, the application relates to a plurality of inventions, or groups of inventions, in the sense of Article 82 and Rule 30(1) EPC. They have been divided as defined above.

9.2 Invention A is considered to be the main invention.

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 00 92 9923

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

17-11-2004

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
JP 08329540	A	13-12-1996	NONE	
JP 08287465	A	01-11-1996	JP 3138610 B2	26-02-2001
EP 0797193	A	24-09-1997	DE 69612833 D1	21-06-2001
			DE 69612833 T2	30-08-2001
			EP 0797193 A1	24-09-1997
			CN 1173941 A	18-02-1998
			CN 1250210 A ,C	12-04-2000
			CN 1250211 A ,B	12-04-2000
			DE 69614005 D1	23-08-2001
			DE 69614005 T2	31-10-2001
			DE 69618034 D1	24-01-2002
			DE 69618034 T2	16-05-2002
			DE 69618680 D1	28-02-2002
			DE 69618680 T2	14-08-2002
			DE 69618681 D1	28-02-2002
			DE 69618681 T2	14-08-2002
			EP 1018727 A2	12-07-2000
			EP 1020850 A2	19-07-2000
			EP 0991058 A1	05-04-2000
			EP 0991059 A1	05-04-2000
			WO 9714143 A1	17-04-1997
			JP 2000155946 A	06-06-2000
			JP 3218235 B2	15-10-2001
			JP 2000048366 A	18-02-2000
			US 5745467 A	28-04-1998